

REMARKS

Before this amendment, claims 1-35 were pending in the present application. Claims 1, 8, 15, 26-28, 30, 32, and 35-37 have been amended. Claims 24, 25, 33, and 34 have been cancelled. New claims 39-42 are added in this response. Accordingly, claims 1-23, 26-32, 35-37 and 39-42 are now pending in the application. In the Office Action mailed May 02, 2007, the Examiner rejected claims 1-35. Applicants respectfully submit that the application is in a condition for allowance.

Objection to the Drawings under 37 CFR 1.83(a)

The Examiner objected to the drawings under 37 CFR 1.83 (a). Applicants respectfully submit that the drawings comply with 37 CFR 1.83 and request that the objection be withdrawn.

The Examiner asserts that "non-contiguous time intervals" recited in claims 1, 8, 15, 26 and 35 are not shown in the drawings. Applicants respectfully submit that non-contiguous time intervals are clearly illustrated in the drawings. For example, FIG. 5 shows several time intervals 412, 414, 410, 416 originating from an original time slot scattered non-contiguously in time.

Objection to claims 32, 34 for informalities

The Examiner objected to claims 32 and 34 because of informalities. Applicants have amended claim 32 to change "method" to --apparatus-- and have cancelled claim 33. Accordingly, applicants respectfully request that the objection be withdrawn.

Rejection under 35 U.S.C § 112

The Examiner rejected claims 26-32, 35 -38 under 35 U.S.C. §112, second paragraph "as failing to define the invention in the manner required by 35 U.S.C 112, second paragraph". Applicants respectfully submit that the claims meet the requirements of 35 U.S.C. 112.

Claim 26 recites an apparatus comprising "means for receiving a request", "means for generating a schedule of transmission" and "means for transmitting the

schedule". These terms positively recite definite elements of an apparatus. The means for generating is further defined by reciting that the schedule of transmission divides the terminal transmissions of time slot data of a time slot into at least two temporally non-contiguous time intervals. Accordingly, claim 26 particularly points out and distinctly claims the subject matter which the applicant regards as the invention.

Claim 27 depends from claim 26 and, as amended, further defines the means for receiving.

Claim 28 depends from claim 26 and, as amended, further defines the means for generating the schedule of transmission to comprise a means for generating a list of time intervals.

Claim 29 depends from claim 28 and further defines each time interval to comprise a starting location in a frame and transmission duration.

Claim 30 depends from claim 26 and, as amended, recites that the apparatus further comprises a means for transmitting modulation control information for the time scattered data.

Claim 31 depends from claim 26 and further defines the communications channel reciting that the channel is divided into frames and wherein each frame is divided into a number of time slots in accordance with a dividing rate.

Claim 32 depends from claim 26 and recites that the apparatus further comprises a means for receiving data from the terminal device.

Accordingly, claims 26-32 recite means-plus-function elements to define an apparatus that receives a request for a communication channel, generates a schedule of transmission, and transmits the schedule to the terminal device requesting the channel. The schedule of transmission is clearly defined as dividing the terminal transmissions of time slot data of a time slot into non-contiguous time intervals. Applicants respectfully submit that claims 26-32 particularly point out and distinctly claim the subject matter which the applicant regards as the invention and that these claims meet the requirements of 35 U.S.C. §112, second paragraph.

As amended, claim 35 recites a terminal device that comprises "a means for receiving one or more scattering instructions" and a "means for transmitting", where the

scattering instructions provide information for temporally scattering at least one portion of a plurality of time slot data of a time slot. Applicants respectfully submit that these limitations particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

Claim 36, depends from claim 35 and recites that the terminal device further comprises a means for receiving configuration information, wherein the one or more scattering instructions are included with the configuration information.

Claim 37 depends from claim 35 and, as amended, recites that the terminal device further comprises a memory for storing time-scattering control information and that the one or more scattering instructions comprise an index into the memory.

Accordingly, claims 35-37 recite means-plus-function elements to define a terminal device that receives one or more scattering instructions and transmits the temporally scattered data. The scattering instructions are clearly defined as providing information for dividing the terminal transmissions of time slot data of a time slot into non-contiguous time intervals. Applicants respectfully submit that claims 35-37 particularly point out and distinctly claim the subject matter which the applicant regards as the invention and that these claims meet the requirements of 35 U.S.C. §112, second paragraph.

Rejection under 35 U.S.C 101

The Examiner rejected claims 8-14 under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. Applicants respectfully submit that claims 8-14 are directed to statutory subject matter and traverse the rejection.

Claim 8-14 recite a “terminal device” and, therefore, are product claims. Claims 8-14 clearly define discrete physical structures. Claim 8 recites physical elements including a processor, a memory, and a machine accessible medium where the medium has instructions encoded therein. The instructions, when executed by the processor, cause the terminal device to perform operations. Accordingly, claim 8 defines a physical structure by reciting physical elements. Reciting that instructions are encoded in the medium does not take the claim out of statutory patentable subject matter. The

Examiner argues that the specification states that invention can be embodied in program code and that software is not a physical thing. The invention that is claimed, however, is a device and is not a signal as the Examiner asserts. Accordingly, applicants respectfully submit that the rejection is improper.

Although claim 37 is not rejected under 35 U.S.C 101, the Examiner argues that claim 37 does not comply with the requirements of the Interim Guidelines and is non-statutory. Applicants respectfully submit that claim 37 is directed to statutory subject matter. Claim 37 depends from claim 35 which recites a terminal device which is within statutory subject matter. As amended, claim 37 recites the terminal device further comprising a memory. Applicants respectfully submit that such a physical structure is well within the scope of statutory subject matter.

Rejection under 102(b) – Nakano

The Examiner rejected claims 1, 2, 5, 7-9, 12-17, 23-28 and 32-36 under 35 U.S.C. §102(b) as being anticipated by Nakano (U.S. Pat No. 5,446,739). Applicants respectfully submit that all the limitations of any one of these claims are not disclosed in Nakano.

Claim 1 recites a method comprising “receiving, at a terminal device, one or more scattering instructions, the scattering instructions providing information for temporally scattering at least one portion of a plurality of time slot data of a time slot, the temporal scattering dividing the at least one portion of time slot data into at least two temporally non-contiguous time intervals.” Applicants respectfully submit that Nakano does not show or discuss this feature. Nakano teaches to assign times slots within a frame. Nakano does not disclose receiving scattering instructions that provide information for scattering at least a portion of time slot data of a time slot into at least two temporally non-contiguous time intervals. Nakano teaches to separate time slots in a frame but does not teach to divide the time slot data of a time slot into multiple time intervals.

Regarding claims 2-7, these claims depend from claim 1 which applicants submit is allowable. Accordingly, applicants respectfully submit that claims 2-7 are at least allowable for the reason that these claims depend from an allowable base claim.

Claim 8 recites a terminal device comprising a machine readable medium having instructions that, when executed on a processor, cause the terminal to “receive one or more scattering instructions, the scattering instructions providing information for temporally scattering at least one portion of a plurality of time slot data of a time slot, the temporal scattering dividing the at least one portion of time slot data into at least two temporally non-contiguous time intervals”. As discussed above, Nakano does not show or discuss dividing time slot data into at least two temporally non-contiguous time intervals”.

Regarding claims 9-14, these claims depend from claim 8 which applicants submit is allowable. Accordingly, applicants respectfully submit that claims 9-14 are at least allowable for the reason that these claims depend from an allowable base claim.

Claim 15 recites a method comprising “generating a schedule of transmission for the terminal device, the schedule dividing the terminal device’s transmissions of time slot data of a time slot into at least two temporally non-contiguous time intervals.” Applicants respectfully submit that Nakano does not disclose this step. As discussed above, Nakano teaches to separate time slots within a frame but does not discuss dividing time slot data of a time slot into at least two temporally non-contiguous time intervals”.

Regarding claims 16-23, these claims depend from claim 15 which applicants submit is allowable. Accordingly, applicants respectfully submit that claims 16-23 are at least allowable for the reason that these claims depend from an allowable base claim.

Claim 26 recites an apparatus comprising “means for generating a schedule of transmission for the terminal device, the schedule dividing the terminal device’s transmissions of time slot data of a time slot into at least two temporally non-contiguous

time intervals". As discussed above, Nakano does not disclose dividing "time slot data of a time slot into at least two temporally non-contiguous time intervals".

Regarding claims 26-32, these claims depend from claim 26 which applicants submit is allowable. Accordingly, applicants respectfully submit that claims 26-32 are at least allowable for the reason that these claims depend from an allowable base claim.

Claim 35 recites a terminal device comprising "means for receiving one or more scattering instructions, the scattering instructions providing information for temporally scattering at least one portion of a plurality of time slot data, the temporal scattering dividing the at least one portion of time slot data of a time slot into at least two temporally non-contiguous time intervals." As discussed above, Nakano does not disclose dividing time slot data of a time slot into at least two temporally non-contiguous time intervals.

Regarding claims 36-37, these claims depend from claim 35 which applicants submit is allowable. Accordingly, applicants respectfully submit that claims 36-37 are at least allowable for the reason that these claims depend from an allowable base claim.

Rejections under 103(a) – Nakano in view of Schlosser

The Examiner rejected claim 3, 4, 6, 10, 11, 18, 19, 22, 29, 30, 31, 37, 38 under 35 U.S.C. §103(a) as being unpatentable over Nakano in view of Schlosser (U.S. Pat No. 3,870,581). Applicants respectfully submit that all the limitations of any one of these claims are not taught or suggested by Nakano, Schlosser, nor a combination of the two. All claims rejected under 103(a) depend from either one of claims 1, 8, 15, 26 or 35. As discussed above, Nakano does not teach or suggest dividing time slot data of a time slot into at least two temporally non-contiguous time intervals. Schlosser discloses a processing repeater in a TDMA system and does not teach or suggest dividing time slot data of a time slot. Schlosser indicates that a frame is divided into time slots but does not teach or suggest to divide the data within a time slot.

Accordingly, applicants respectfully submit that neither Nakano, nor Schlosser, nor a combination of the two, teaches or suggests dividing time slot data of a time slot into non-contiguous time intervals and that the claims are allowable over the cited art.

REQUEST FOR ALLOWANCE

In view of the foregoing, applicants submit that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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